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(21)Application number : **63-302887**(71)Applicant : **MATSUSHITA ELECTRIC IND CO LTD**(22)Date of filing : **30.11.1988**(72)Inventor : **YANAGIHARA NOBUYUKI
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(54) ALCOHOLIC FUEL BATTERY AND OPERATING METHOD THEREOF

(57)Abstract:

PURPOSE: To improve the safety and maintain the high voltage even at the high current density and reduce the demand of the auxiliary machine and reduce the lower of the battery performance at the time of generating electricity for a long time with the high efficiency by forming a fuel electrode with a catalyzer layer for storing the electrolyte and a water repellent layer for exhausting the reaction product gas, and circulating the alcoholic fuel aqueous solution.



CONSTITUTION: A fuel electrode 3 consists of a catalyzer layer 18 for storing the electrolyte and a water repellent layer 17 for exhausting the reaction product gas, and the catalyzer layer 18 contacts to the cation exchange membrane 1 side the water repellent layer 17 is located at the alcoholic fuel aqueous solution 7 side. The fuel electrode also comprise an alcoholic fuel aqueous container 8 for communicating a fuel electrode solution chamber 10 and an external passage so that the alcoholic fuel aqueous solution can circulate through them, and is formed so that the alcoholic fuel is circulated through the fuel electrode solution chamber 8 of each cell by the ascending work of the reaction product gas 9. Thereby, since the alcoholic fuel aqueous solution 7 which does not include the electrolyte is circulated to be supplied into the solution chamber 10 of the fuel electrode 3, even if the liquid spill to the outside is generated, the peripheral equipment is not damaged, and safety during the operation is sharply improved.



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